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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/565,775	06/20/2006	Kazuo Sato	SATO3028/GAL/PMB	2385
23364 7590 02/27/2009 BACON & THOMAS, PLLC 625 SLATERS LANE FOURTH FLOOR ALEXANDRIA, VA 22314-1176				
EXAMINER				
VO, TUYEN KIM				
ART UNIT		PAPER NUMBER		
2887				
MAIL DATE		DELIVERY MODE		
02/27/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/565,775

Applicant(s)

SATO ET AL.

Examiner

Tuyen Kim Vo

Art Unit

2887

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 January 2009.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-944)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 01/15/2009 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-3 and 7-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Natsukari et al. (previously cited) in view of Namizuka et al. (US 2006/0098227 A1).

Re claims 1 and 3, Natsukari teaches a two dimensional code formation method comprising: a step of specifying code size for a two-dimensional code (see fig. 3 and [0010]); a step of calculating cell size for a unit cell of said two-dimensional code providing storage of said storage information in said 2-dimensional code having said specified code size (see fig. 3 and [0010]); a step of specifying the dot step size or number of dots $n \times m$ (where n and m are natural numbers) to be arranged vertically and horizontally inside said unit cell (see, fig. 3 and [0025]); a step of creating laser-marking information for forming said 2-dimensional code having said specified code size, based on said code size, said storage information, said cell size and said dot step size or number of dots (see [0098]-[0103]); and a step of laser marking said 2-dimensional code having said specified code size, based on said laser-marking information (see [0115]). See fig. 3 and [0094]-[0115].

However, Natsukari fails to teach fixed code size for 2-dimensional code regardless of an amount of storage information to be written in the code.

Namizuka teaches changing in pixel density with respects to the fixed size of the code. See figs. 12A-12C and [0109]-[0116].

In view of Namizuka's teachings, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the system of Natsukari by providing adjustable density of a fixed code size for the two-dimensional

code as taught by Namizuka so that a high-quality image can be produced. Such modification would increase a storage capacity of the two-dimensional code with respects to the fixed size.

Re claims 2, 8 and 11, Natsukari as modified by Namizuka teaches all subject matter claimed as applied above. In addition, Natsukari further teaches the calculation means performs a process of changing the cell size of the unit cell passed on change information for the storage information that was acquired by the information acquisition means. See [0112], [0113], [0125] and [0176].

Re claims 7 and 10, Natsukari teaches a system and method of a two dimensional code formation device comprising information-acquisition means (see figures 3-7) for acquiring the code size of 2-dimensional code, storage information that is to be written in said 2-dimensional code, the number of unit cells of said 2-dimensional code, and the dot step size or number of dots $n \times m$ (where n and m are natural numbers) arranged vertically and horizontally inside a unit cell of said 2-dimensional code (see [0094]-[0126]); calculation means (figure 8) for performing a process of calculating the cell size based on said code size and number of cells, and a process of creating laser-marking information based on said code size, said storage information, said cell size, and said dot step size or number of dots (see [0127]-[0139]); and laser-marking means (see [0058]) for performing laser marking of 2-dimensional code based on said laser-marking information. In general, see figure 2 and [0009]-[0031].

However, Natsukari fails to teach fixed code size for 2-dimensional code regardless of an amount of storage information to be written in the code.

Namizuka teaches changing in pixel density with respects to the fixed size of the code. See figs. 12A-12C and [0109]-[0116].

In view of Namizuka's teachings, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the system of Natsukari by providing adjustable density of a fixed code size for the two-dimensional code as taught by Namizuka so that a high-quality image can be produced. Such modification would increase a storage capacity of the two-dimensional code with respects to the fixed size.

Re claims 9 and 12, Natsukari as modified by Namizuka teaches all subject matter claimed as applied above. In addition, Natsukari further teaches the calculation means performs a process of creating different laser-marking information having different density based on change information for the step size or number of dots that was acquired by the information acquisition means. See [0012], [0102] and [0103].

5. Claims 4, 6 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Natsukari et al. as modified by Namizuka, in further view of Struye et al. (previously cited).

Re claims 4 and 13, Natsukari as modified by Namizuka teaches all subject matter claimed as discussed above (see section 4).

However, Natsukari as modified by Namizuka fails to teach the two dimensional code comprising means for acquiring, storing and converting the manufacturing history information as recited in claims 4 and 13.

Struye teaches items (which serves as products) that can be marked in order to trace its manufacturing history. See [0080].

In view of Struye's teachings, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the two-dimensional code of Natsukari as modified by Namizuka to have tracking information/code as taught by Struye in order for receiving parties to keep track of all the information including the manufacture's history in their own databases for future references. Moreover, the product can also be detected and inspected by the manufacturer.

Re claim 6, the teachings of Natsukari as modified by Namizuka and Struye have been discussed above. In addition, Natsukari further teaches the laser marking step includes a process of reading the two dimensional code that was laser marked and checking whether or not marking of the two dimensional code is correct. See [0192]-[0196].

6. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Natsukari as modified by Namizuka and Struye as applied to claim 4 above, and further in view of Endo et al. (previously cited).

Re claim 5, the teachings of Natsukari as modified by Namizuka and Struye have been discussed above. However, Natsukari as modified by Namizuka and Struye fail to teach laser marking the code by continuous laser-beam irradiation.

Endo teaches generating laser markings using continuous laser-beam irradiation. See [0094].

In view of Endo's teachings, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the system of Natsukari as modified by Namizuka and Struye by providing the continuous laser-beam irradiation for generating the code as taught by Endo so that irradiation position of the laser beam is dot-like or continuous, whereby desired symbols, characters, and marks can be formed as the marking pattern on the material. See Endo: paragraphs [0094] and [0400].

Response to Arguments

7. Applicant's arguments with respect to claims 1-13 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuyen Kim Vo whose telephone number is (571)270-1657. The examiner can normally be reached on Monday - Friday, 7:30a.m. - 5:00p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven S. Paik can be reached on (571) 272-2404. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/T. K. V./
Examiner, Art Unit 2887

/Thien M. Le/
Primary Examiner, Art Unit 2887
